
IN THE SPECIFICATION

References to the "paragraphs" below are with respect to the originally filed patent application, which (as downloaded from the PAIR database) appears to be a copy of the International Application, WO 2004/006184.

Please replace the bridging paragraphs on page 10 and 11 with the following rewritten paragraph:

A major element in MCIP is data reduction, which is achieved by the distribution of the image processing algorithms. Since all the video sources, which require event detection, transmit concurrently, the required network bandwidth is reduced by generating a reduced bandwidth feature stream 201 in the vicinity of each camera. In order to detect, track, classify and analyze the behavior of objects present in video sources, there is no need to transmit full video streams, but only partial data, which contains information regarding describing basic attributes of each video scene.

Please replace the second full paragraph on page 11 with the following rewritten paragraph:

By doing so, a significantly smaller data bandwidth is used, which reduces the demands for both the network bandwidth and the event detection processing power. Furthermore, if only the shape, size, direction of movement and velocity should be detected, there is no need to transmit data regarding their intensity or color, and thus, a further bandwidth reduction is achieved. Another bandwidth optimization may be achieved if the encoder in the transmitting side filters out all motions which are under a motion threshold, determined by the remote central server 203. Such threshold may be the amount of motion in pixels between two consecutive frames, and may be determined and changed dynamically, according to the attributes of the acquired image, such as resolution, AOI, compression level, etc. Areas of movement which are under the threshold are considered either as noise, or non-interesting motions.

Please replace the bridging paragraphs on page 11 and 12 with the following rewritten paragraph:

Fig. 1 schematically illustrates the structure of a surveillance system that comprises a plurality of cameras connected to a data network, according to a preferred embodiment of the invention. The system 100 comprises n image sources (in this example, n cameras, CAM1,...,CAM n), each of which connected to a digital encoder ENC j , for converting the images acquired by CAM j to a compressed digital format. Each digital encoder ENC j is connected to a digital data network 101 at point P j and being capable of transmitting data, which may be a reduced bandwidth feature stream 201 or a full compressed video stream, through its corresponding channel C j . The data network 101 collects the data transmitted from all channels and forwards them to the MCIP server 102, through data-bus 103. MCIP server 102 processes the data received from each channel and controls one or more cameras which transmit any combination of the reduced bandwidth feature stream and the full compressed video stream, which can be analyzed by MCIP server 102 in real time, or recorded by NVR 104 and analyzed by MCIP server 102 later. An operator station 105 is also connected to MCIP server 102, for real time monitoring of selected full compressed video streams 205. Operator station 105 can manually control the operation of MCIP server 102, whenever desired.

Please replace the last full paragraph on page 13 with the following rewritten paragraph:

Fig. 2 illustrates the use of AOI's (Area of Interest) for reducing the usage of system resources, according to a preferred embodiment of the invention. An AOI is a polygon (in this Fig., a hexagon) that encloses the area where detection will occur. The rectangles indicate the estimated object size at various distances from the camera. In this example, the scene of interest comprises detection movement of a person in a field (shown in the first rectangle). It may be used in the filtering unit to decide if further processing is required. In this case, the filtering unit examines the feature data. The feature stream is

analyzed to determine if enough significant features lie within the AOI. If the number of features that are located inside the AOI and comprise changes, exceeds the threshold 207, then this frame is designated as possibly containing an event and is transferred for further processing. Otherwise, the frame is dropped and no further processing is performed.

Please replace the first full paragraph on page 14 with the following rewritten paragraph:

The MCIP server receives the reduced bandwidth feature stream (such a feature stream is not a video stream at all, and hence, no viewable image can be reconstructed thereof) from all the video sources which require event detection. When an event is detected 209 within a reduced bandwidth stream that is transmitted from a specific video source, the central server may instruct this video source to change its operation mode to a video stream mode, in which that video source may operate as a regular video encoder and transmits a standard video stream, which may be decoded by the server or by any receiving party for observation, recording, further processing or any other purpose. Optionally the video encoder also continues transmitting the feature stream at the same time.

Title: METHOD AND SYSTEM FOR EFFECTIVELY PERFORMING EVENT DETECTION IN A LARGE NUMBER OF CONCURRENT
IMAGE SEQUENCES

IN THE TITLE

Please replace the title as follows:

METHOD AND SYSTEM FOR EFFECTIVELY PERFORMING EVENT
DETECTION ~~IN A LARGE NUMBER~~ USING FEATURE STREAMS OF CONCURRENT
IMAGE SEQUENCES